

3.0 EXISTING CONDITIONS AND RESOURCES

This section focuses on wildland fire issues and how they impact current conditions in Fremont County. Existing conditions were determined by: (1) meetings with all local fire chiefs, as well as local, state, federal employees, and county residents; (2) Inspectors drove major county roads within the county; (3) Fuel loads were assessed along roads and sub-division perimeters; (4) Road conditions and vehicle access to areas of concern were evaluated; (5) Photographs were taken of structures and areas of concern; (6) Structures were evaluated in accordance with a Structure Assessment Ignition Model (Jack D. Cohen, 1995) that takes into consideration structure type, construction materials, topography, and potential fire characteristics around the structure; (7) Wildland Fire Hazard Assessment and Community Assessment forms were completed for every area of concern; and (8) Fire fighting water sources such as hydrants, ponds, live streams, and irrigation mainline access points were defined. The fire history, frequency and danger indices for Fremont County along with energy release component and wildland fuels data are provided by Conran (2004).

Fire History, Frequency and Danger Index

Wildfire risk within and around Fremont County is generally moderate due to the proximity of large areas of agricultural land, the relatively high precipitation zone, and the short burning season.

Fire history data show the Island Park and Ashton Ranger Districts on the Caribou-Targhee National Forest experience approximately 13-wildfire ignitions per year (Figure 7). These fires burn an average of 688 acres per year. One notable exception was the North Fork Fire, which occurred in 1988, which burned 427,680 acres both on the Targhee NF, and in Yellowstone National Park (17,700 of these acres occurred within Fremont County). The core of the fire season occurs during the months of July-September. These months account for approximately 81% of the fire ignitions, which have occurred from 1970-2003. The primary specific cause of wildfires in this area is lightning which accounts for approximately 43% of the fire ignitions with the remaining 57% of fire ignitions being caused by humans. Most of the fire ignitions, approximately 95%, have been successfully initial attacked and controlled at less than 10 acres. Figures 9 and 10 show the fire starts for North Fremont and South Fremont Fire Districts respectively.

Figure 7: Island Park Fire District Fire Locations and Starts.

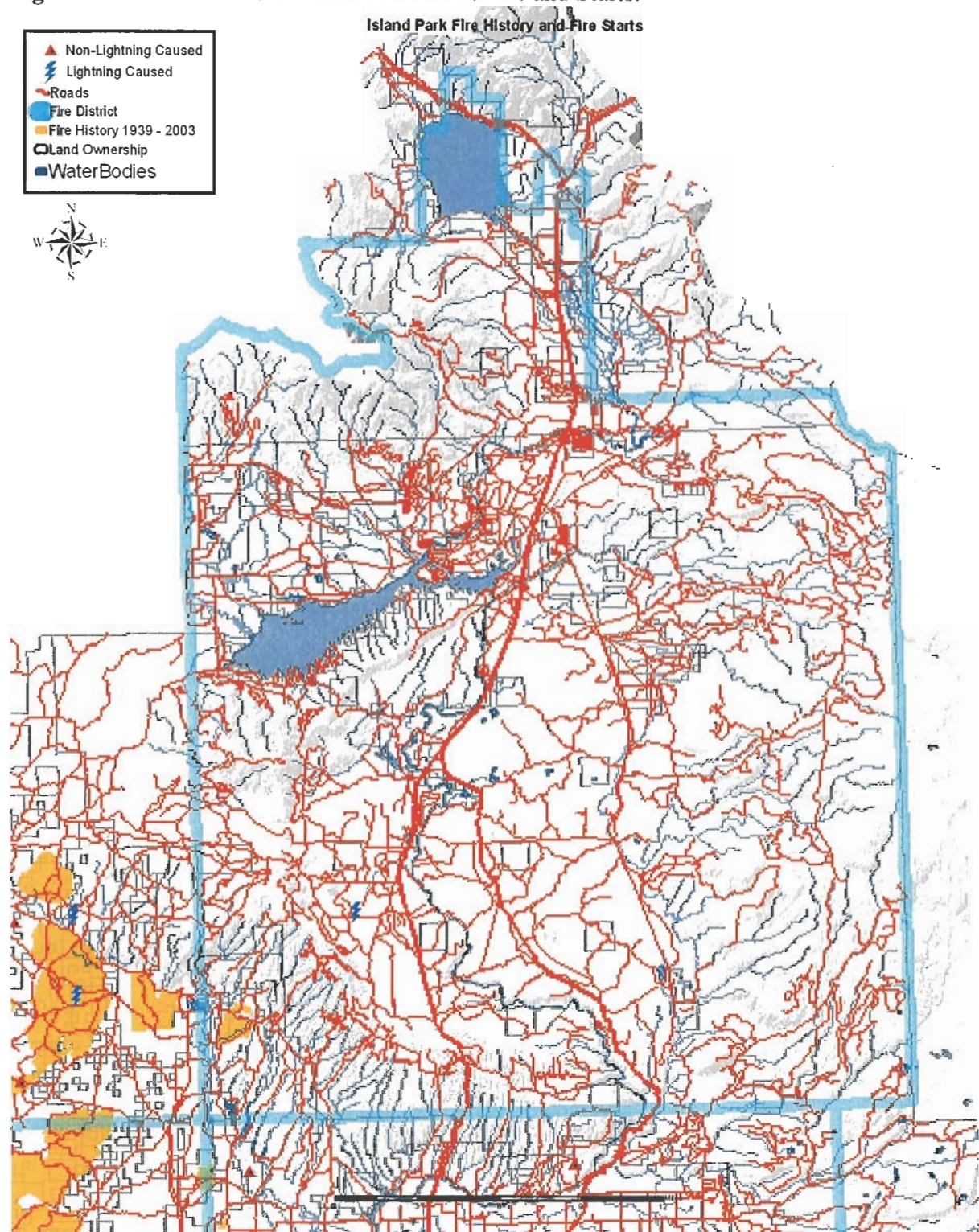


Figure 8: Island Park and Ashton Ranger Districts fire history for years 1970-2000.

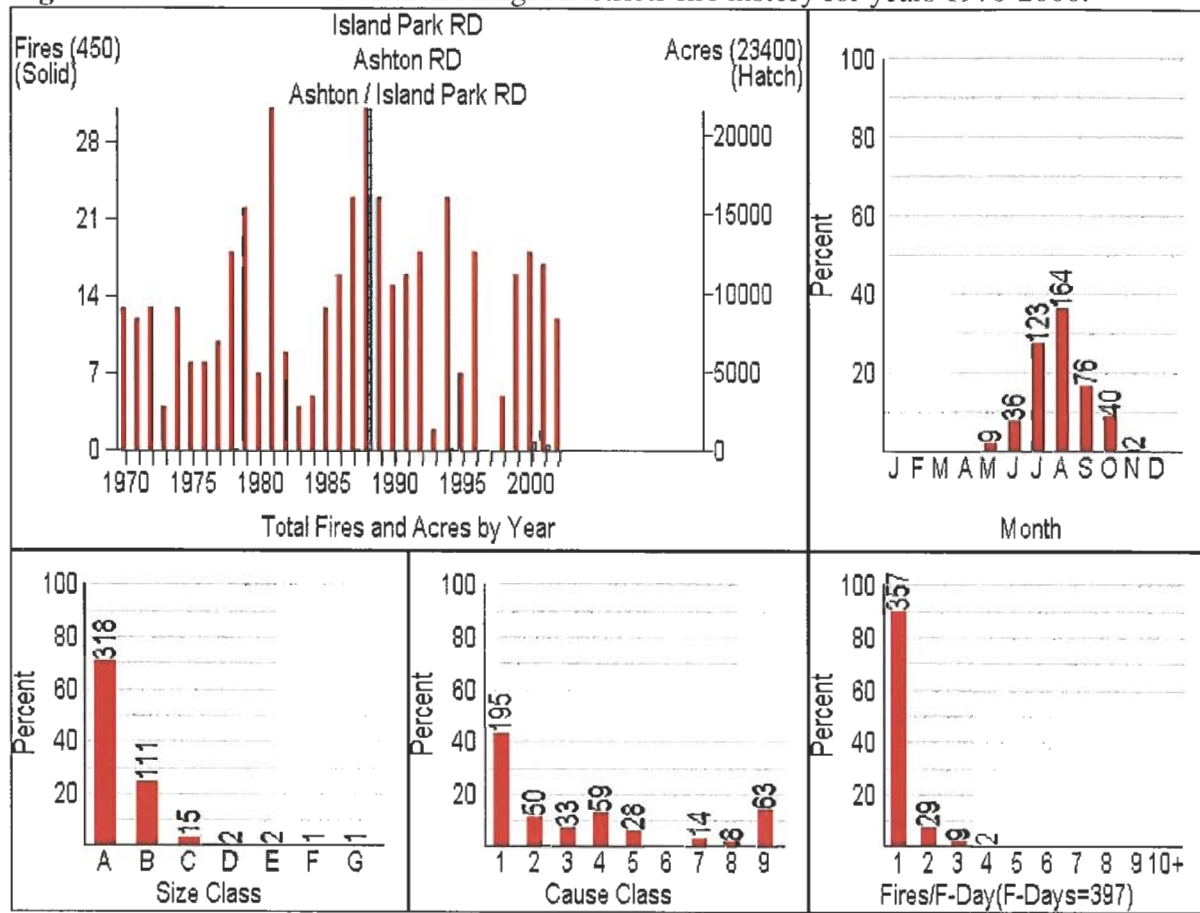


Figure 9: North Fremont Fire Locations and Starts.

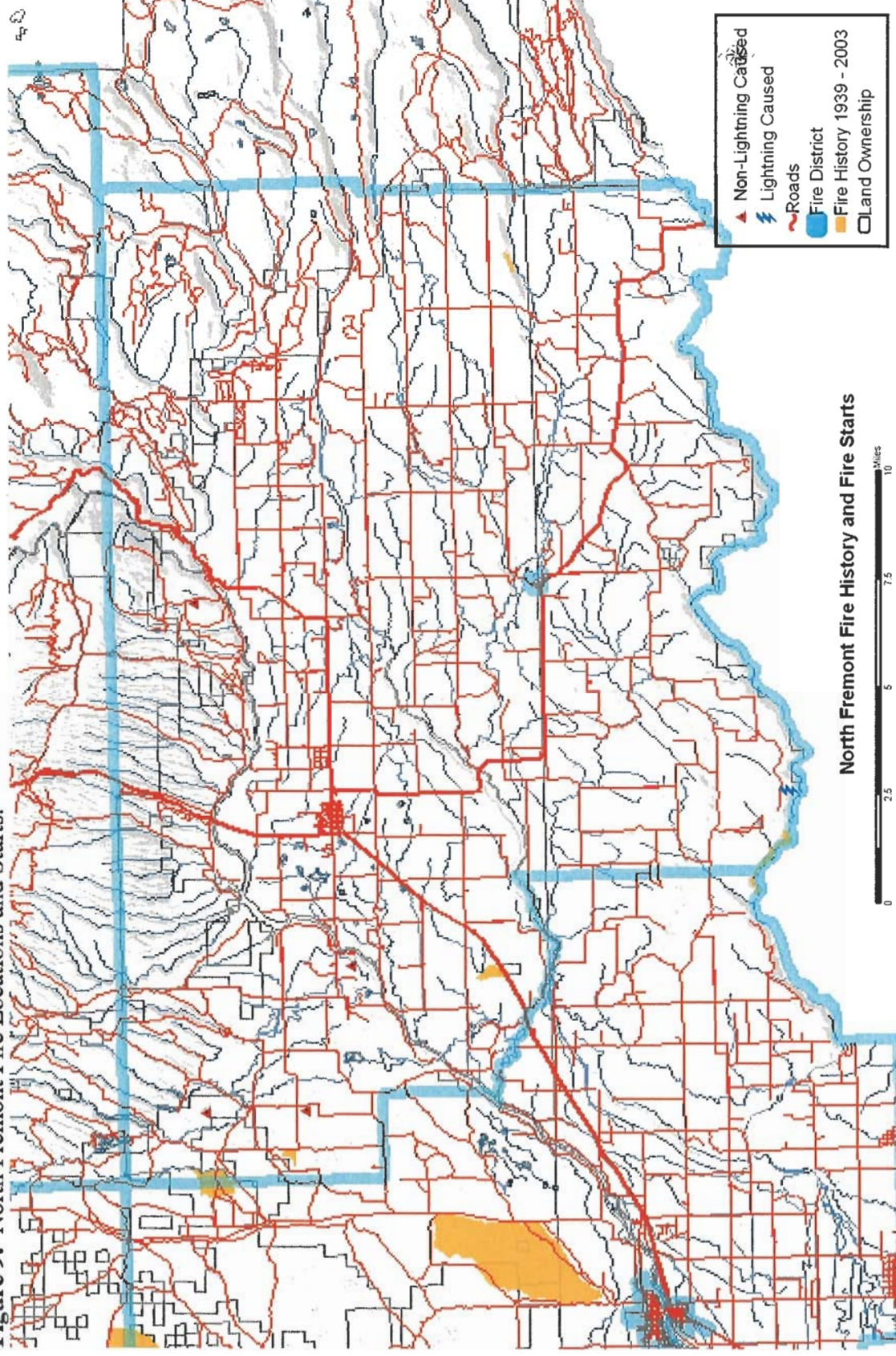
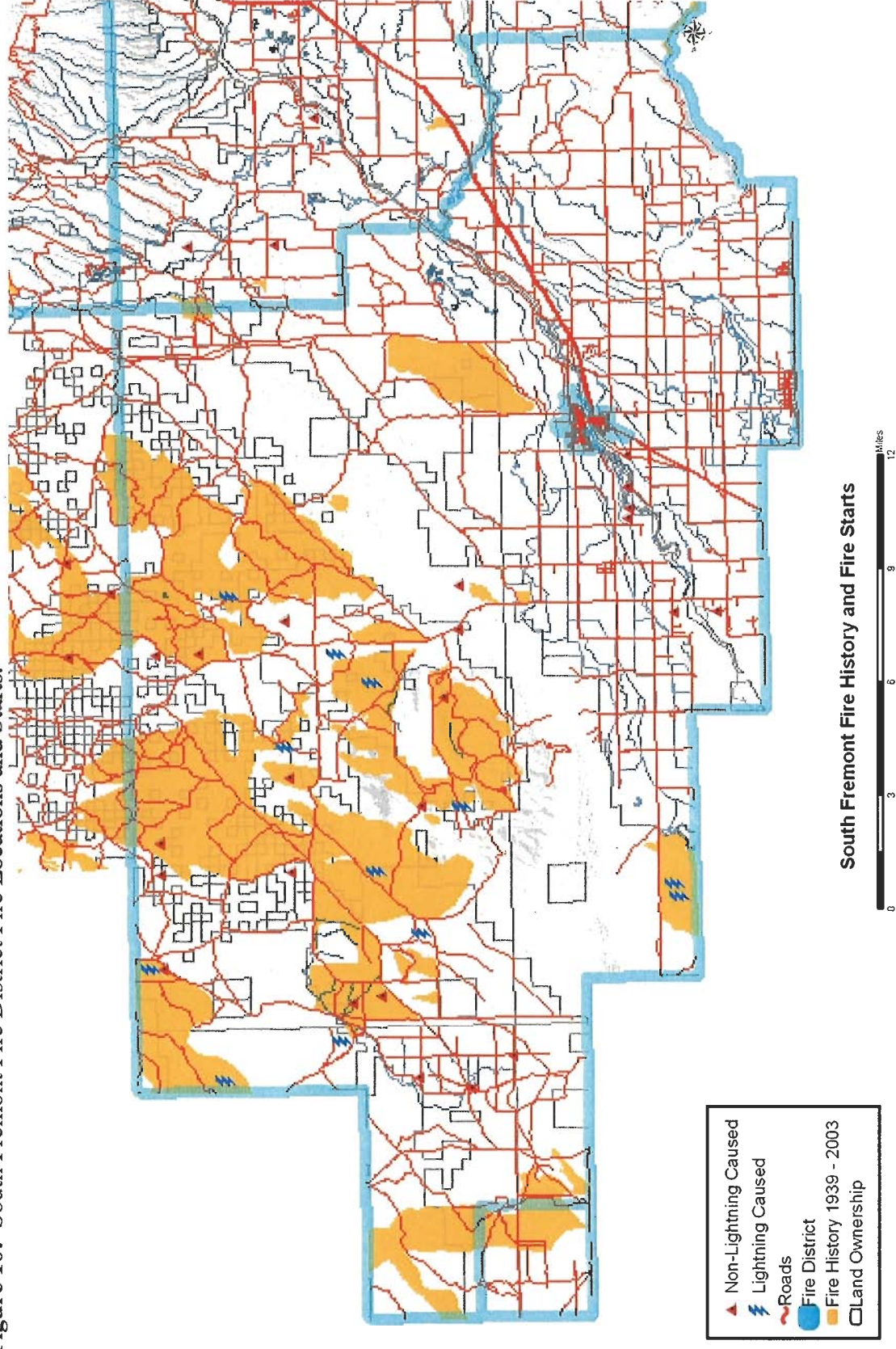


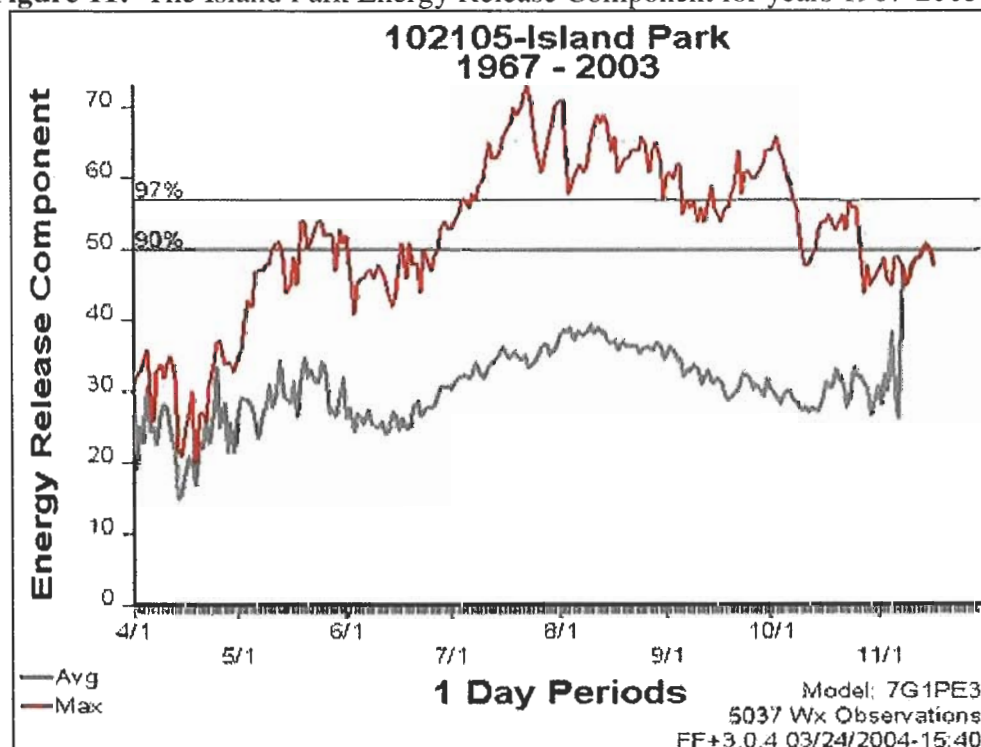
Figure 10: South Fremont Fire District Fire Locations and Starts.



Energy Release Component (ERC) is a fire danger index computer model utilizing weather data from a network of remote weather stations one of which is located in Island Park. ERC is heavily weighted in the model towards dead fuel moisture or “how hot could a fire burn.” The unit of measure is in BTU’s/sq foot at the head of the fire. Each unit of ERC is valued at approximately 25 BTUs. This is a measure that attempts to predict the amount of energy that is available for release during combustion. For example if the ERC is 20, that loosely means that 500 BTUs are available for release per square foot at the head of the fire.

ERC is calculated every day during the fire season and is compared to historic levels to gauge the severity of the fire danger. This indicator is used by the federal agencies as a good gauge of the fire danger over the course of a fire season. Figure 11 shows how ERC rises over the course of a fire season in Island Park for years 1967 through 2003 and hits its peak during the summer fire season.

Figure 11: The Island Park Energy Release Component for years 1967-2003.



Fuels

Wildland fuels can be classified into four basic groups: Coniferous Timber, Other Timber (such as aspen), Grass, and Brush (which includes sagebrush, juniper and other shrubs). Each of these groups has different fire behavior characteristics, as described below.

Grass (National Fire Danger Rating Fuel Models A and L): Grass fuel types respond quickly to changes in fuel moisture so they will get wet quickly during periods of rain and dry out quickly during periods of warm and dry weather. Fire behavior in this model when

dry, can be characterized by rapid rates of spread, and due to the fact that these areas are oftentimes exposed directly to wind, rates of spread can be further increased due to wind effects. Because these areas don't usually have a large component of large fuels such as downed logs etc, fires in this fuel type generally don't produce a large amount of heat for long in a given area and go out quickly behind the fire front as fuel is rapidly consumed as the fires burns along. The majority of the heat and fire behavior is at the flaming front of these types of fires and on the flanks. Due to exposure to winds in this fuel type, these fires can change direction readily in response to changes in wind direction. Spot fires can occur readily in these fuel types as the wind blows burning embers ahead of the fire.

Brush (National Fire Danger Rating Fuel Model T): Brush fuels respond moderately to changes in fuel moisture so they will be slower to respond than grasses but quicker than in the timbered fuel types. Fire behavior in this fuel type when dry, can be characterized by rapid rates of spreads and because of the influences of wind, can change direction and produce spot fires. Individual or groups of the brush component torching and showering sparks and embers ahead of the fire often generate spot fires. Because the brush species have a heavier component of larger diameter woody material, fires in this fuel group tend to produce more heat in a given area than a fire in the grass fuel group would produce.

Coniferous timber (National Fire Danger Rating Fuel Model G and H): Coniferous timbered fuel types respond more slowly to changes in fuel moisture due to a heavier component of downed dead woody material and the sheltering effect from both wind and sun from the tree canopy. Fires will generally spread more slowly in this fuel type than in the grass and brush fuel groups but fires will burn hotter and with more intensity due to the amount of heavy fuel accumulations on the ground. Spot fires can be created by individual and groups of trees torching out and in extremely dry conditions fire can make runs through the tree crowns in conjunction with or independently of the ground fire. Many of the coniferous tree species have tree limbs, which can reach, from the ground all the way up to the top of tree, which can create "ladders" which can enable the fire to get from the ground into the crowns of the tree and the crowns of adjacent trees. From a firefighting perspective, fires in this fuel type even if small in size can create a great deal of work to combat due to the amount of fuel and resultant chainsaw work required. In Fremont County, this fuel group is predominated by lodgepole Pine in many areas along with stands of mixed conifers such as Douglas-fir, subalpine Fir, whitebark pine and spruce.

Other timber (National Fire Danger Rating Fuel Model E): This group includes deciduous trees such as aspen and cottonwood. This group generally is not a fire concern since they tend to grow in wetter and sometimes rocky areas. Also, this group tends not to have numerous low limbs to create ladders and an understory of fine fuels to carry a fire. Although thought of as a natural fuel break in most instances, this group will burn under extremely dry conditions. From a firefighting perspective, fires in these areas are extremely labor intensive to suppress and require large amounts of water to extinguish.

Mutual Aid Agreements

The Districts also have written mutual aid agreements with the U.S. Forest Service and the Bureau of Land Management and Island Park has a written agreement with Idaho Department of State Lands and a gentleman's agreement with other surrounding fire departments. Island Park District has no written mutual aid agreements with the other Fremont County fire districts.

Parcels vs. Subdivisions

The County and State subdivision regulations cover dividing of lands within the county, but there are many pieces of land, or parcels, which have homes on them that in some cases predate existing regulations. These parcels are not part of a legal subdivision and may have different regulations covering their future development.

Description of Assessment Areas

Fremont County assessment area includes three Fire Districts that encompass 1,388,800 acres of response area (High Country RC & D 2003). Table 8 is a breakdown of the land ownership within the fire districts. This differs from the RC & D total because the fire districts respond to fires outside of their district as a result of the mutual aid agreements. Some of these acres are counted in all the fire districts that respond to that area so some areas are counted at least twice. Included in this response area are rangelands, forest, WUIs, residential, business, a propane bulk plant (St. Anthony) and fertilizer plant. Fremont County Fire Districts are Island Park, North Fremont, and South Fremont. The major population centers are Ashton, Island Park, Newdale, Parker, St. Anthony, and Teton.

Table 8: Landownership (in acres) within each Fremont County Fire District.

	BLM	USFS	NPS	State	Private	Total
Island Park	12,581	381,798	529	27,506	41,643	464,057
North Fremont	9,646	23,703	0	1,074	152,315	186,738
South Fremont	80,995	6	0	34,453	146,702	262,156
Total						912,951

Fire District Current Resources and Assets

The current resources and assets of each Fire District are shown in Tables 9, 10, and 11.

Firefighter and Public Safety

It is important to keep in mind throughout this assessment that firefighter and public safety have to be the number one priority and consideration when assessing subdivisions or individual homes for protection. The Fire Chiefs will not put the firefighters at risk by sending them into areas with narrow roads with no turn-around space or turn-outs, dense vegetation, no defensible space and little or no water beyond what is on the truck.

Evacuation of the public from fire areas is always difficult but made doubly so by the narrow roads and one-way-in-one-way-out types of situation that exists in most of the subdivisions.

Table 9: Summary of the Island Park Fire District Assessment.

Island Fire District Assessment Overview – Resources and Assets	
Facilities	There are four fire stations, located in Shotgun Valley, Last Chance, Mack's Inn (main station) and Henry's Lake. They house all of the District and city fire fighting apparatus, offices and training facilities.
Response Area	The Island Park Fire District is a fire protection district located on Highway 20 at Mack's Inn. It serves the Shotgun, Last Chance and Henry's Lake areas of Island Park. It is in the boundaries of the Targhee National Forest with topography of high elevation, heavily forested areas with some rolling hills and mountainous areas. The area offers many diverse types of recreation from motorized activities like snow machining in winter, to fishing, hunting, camping, hiking and boating in summer. Several bodies of water are in the area including the Henry's Fork of the Snake River, Island Park Reservoir and Henry's Lake. It is a popular vacation area with an influx of people during recreational months and the year round population base of the area is experiencing some growth.
Budget and Funding	100% of this Fire Districts base funding is currently derived from taxes.
Grants	This Fire District has received grants from State IDS-excess property, BLM/FS, NFP, private foundations and State EMS (extrication equipment).
Records Management	This Fire District has in place a computerized RMS program, personnel training records database, and an inventory database program.
Hazardous Materials Program	This district does not have a Hazmat team. MVERT mutual aid agreement and ISP provide Hazmat response teams to this Fire District.
EMS Program	First responder training has been completed and is in use. Volunteers are trained in the use of the extrication equipment from State EMS.
Training and Certification	Training records for fire personnel are available at the Fire District headquarters. All active fire personnel are trained in emergency vehicle driving skills and eight have been trained in wildland fire fighting techniques.
Communications	All emergency fire-fighting vehicles have radio communications. Handheld radios are available when needed. Dispatch duties are handled through the Sheriff's office.
Prevention and Inspection	Fire District personnel do not perform fire code enforcement or fire inspections.
Public Education	Fire personnel participate in annual events such as Fire Station open house and tours. They also present information to the Scouting program on fire safety and prevention.

Table 10: Summary of the North Fremont Fire District Assessment.

North Fremont Fire District Assessment Overview – Resources and Assets	
Facilities	The main fire station, located in Ashton, ID is the only permanent fire facility in this Fire District. It houses all district and city fire fighting apparatus, offices and training facilities.
Response Area	North Fremont Fire District is located in central Fremont County. It is comprised of agricultural lands interspersed with sagebrush/grasslands with some forested lands on the North and East. The main agricultural activities are potato farming and ranching. Two fertilizer plants in Ashton and Drummond have been identified as high risk areas.
Budget and Funding	Base Funding for this Fire District is derived 90% from taxes, and 5% each from EMS and Grants.
Grants	This Fire District has received grants from private foundations (Vasak Foundation) and the BLM/FS in the form of wildland fire equipment.
Records Management	This Fire District has a computerized personnel training records database, emergency call volume, fire fighting agreements and equipment maintenance.
Hazardous Materials Program	This district does not have a Hazmat team. MVERT mutual aid agreement and ISP provide Hazmat response teams to this Fire District.
EMS Program	EMS services are separate from Fire District activities and are managed by a separate board of directors.
Training and Certification	Training records for fire personnel are available at the Fire District headquarters. All active fire personnel are provided training that provides basic certifications in both firefighting and EMS activities. Fifteen fire fighters are trained in wildland fire techniques.
Communications	All emergency firefighting vehicles have radio communications. Handheld radios are available when needed. Dispatch duties are handled through the Fremont County St. Anthony 911 dispatch.
Prevention and Inspection	Trained fire personnel do not enforce fire codes in accordance with the International Fire Code this is done through the State Fire Marshal's office.
Public Education	Fire personnel conduct annual visits to the fire station for grade school children to promote fire prevention and home fire safety programs. They also present information to the Scouting program on fire safety and prevention

Table 11: Summary of the South Fremont Fire District Assessment.

South Fremont Fire District Assessment Overview – Resources and Assets	
Facilities	There is one fire station located at St. Anthony and it houses district and city fire fighting apparatus, offices and training facilities.
Response Area	South Fremont Fire District is located in the southern portion of Fremont County and services agricultural, rangelands, WUI, residential and business concerns. The Propane bulk plant and the District Fertilizer Plant were identified as high risk facilities.
Budget and Funding	100% of this Fire Districts base funding is currently derived from taxes.
Grants	This Fire District has received grants from BLM/FS Rural Assistance.
Records Management	This Fire District maintains a comprehensive records management system that is currently not computerized. They track training, incident reports, personnel, vehicle and building maintenance.
Hazardous Materials Program	This district does not have a Hazmat team.
EMS Program	EMS services are separate from Fire District activities.
Training and Certification	Training records for fire personnel are available at the Fire District headquarters. All active fire personnel are trained in essentials of fire, Hazmat awareness, Initial Attack (structures) Standards for Survival and 12 are trained in Wildland Fire Fighting Techniques.
Communications	All emergency firefighting vehicles have radio communications. Handheld radios are available when needed. Dispatch duties are handled through the Fremont County St. Anthony 911 dispatch. In addition, the fire district has a 24-7 dispatch on duty.
Prevention and Inspection	Fire personnel do not enforce Fire Code regulations.
Public Education	Fire personnel conduct annual visits to grade schools to promote fire prevention and home fire safety programs.

Fire Fighting Apparatus

The following equipment lists are by Fire District and includes only serviceable, fully equipped apparatus. All three of the Fire Districts have the basic fire fighting equipment required for structure and wildland fires. At this time all active fire/emergency personnel have pager and/or radio communication to respond to an emergency call. VHF radios are in wildland fire vehicles to communicate with BLM and other government emergency responders.

Island Park Fire District Equipment

- 2001 E-One Class A Pump truck, 2,500 gal. tank, 1,000 gpm pump.
- 1995 E-One Class A Pump truck, 1,000 gal. tank, 1,000 gpm pump.
- 1988 FMC Class A Pump truck, 1,000 gal. tank, 1,000 gpm pump.
- 1973 Ford Tanker, includes 3 Port-a-Pumps.
- 1993 Chevrolet 4x4, Brush/Rescue truck, 300 gal. tank, 200 gpm pump.

North Fremont Fire District Equipment

- 1997 Freightliner Class A Pump truck, 1,500gal. tank, 1,000gpm pump.
- 1980 Chevrolet Class A Pump truck, 1,000gal. tank, 750gpm pump.
- 1970 Vanpelt Class A Pump truck, 1,500gal. tank, 400gpm pump.
- 1990 Ford 4x4, Brush truck, 250 gal. tank, 35 gpm pump.
- 1997 Ford, 300 gal. tank, 100 gpm pump.
- 1976 Ford, Tanker, 3,000 gal. tank, 200 gpm pump.

South Fremont Fire District Equipment

- 1995 Ford Class A Pump truck, 1,000 gal. tank, 1,250 gpm pump (foam unit).
- 1975 Ford Class A Pump truck, 500 gal. tank, 750 gpm pump.
- 1980 Chevrolet Class A Pumper/tanker truck, 3,000 gal. tank, 1,250 gpm pump.
- 1990 GMC Class A Pump truck, 1,000 gal. tank, 1,250 gpm pump.
- 1995 Chevrolet Brush truck, 200 gal. tank, 100 gpm pump (foam unit).
- 2002 Ford Brush truck, 300 gal. tank, 100 gpm pump (foam unit).